

## Preformed Styrofoam Utility Pipe/Conduit Weight Credit Support Unit Inventor: Victor Kazys Sestokas Application Nr 10/644,986 19 July 2004

## **Claims**

- 1. The Styrofoam utility pipe/conduit cradle device provides for continuous and uniform support for linear pipe/conduit installations where the in situ soil conditions are such that the net additional gravity load form the pipe/conduit could cause settlement, differential or otherwise, resulting in vertical discontinuity of the utility pipe/conduit system which can cause breakage, open joints, or other deformation.
- 2. The extreme light density of the Styrofoam cradle when installed below the ground surface provides for a "weight-credit" simply by volumetric substitution of the displaced more dense native soil with the light weight Styrofoam; thus with a proper engineering design, diminishing in all or to some degree, the additional gravity load and surcharge imposed on the subsurface soil material by the overlying utility pipe/conduit system. The end result is significant reduction or even total elimination of potential settlement/subsidence of the utility pipe/conduit system installation.
- 3. The natural buoyancy of the light-weight Styrofoam material allows for additional support of utility pipe/conduit systems in high water table soil conditions or even in open waters much like a raft; thus eliminating the need for complex and expensive pilings, caissons or other conventional foundations/method-of-support. The utility piping/conduit systems with proper engineering design can be fully and uniformly supported in the Styrofoam cradle in the high water table conditions of marshes, swamps, wetlands, etc., anywhere the submerged soil conditions are of unfavorable bearing capacity.